Middle Ohio-Laughery Watershed Restoration Action Strategy

Part II: Concerns and Recommendations

Prepared by
Indiana Department of
Environmental Management
Office of Water Management
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Foreword

The First Draft (October 1999) of the Watershed Restoration Action Strategy (WRAS) was reviewed internally by IDEM and revised accordingly. The Second Draft (Spring 2000) was reviewed by stakeholders and revised accordingly. This Third Draft (June 2000) is intended to be a living document to assist restoration and protection efforts of stakeholders in their subwatersheds. As a "living document" information contained within the WRAS will need to be revised and updated periodically.

The WRAS is divided into two parts: Part I, Characterization and Responsibilities and Part II, Concerns and Recommendations.

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Middle Ohio-Laughery Watershed Restoration Action Strategy

Part II: Concerns and Recommendations

Part II of the Watershed Restoration Action Strategy discusses the water quality concerns identified for the Middle Ohio-Laughery watershed and lists recommended management strategies to address these concerns.

Part II includes:

Section 1	Water Quality Concerns and Priority Issues Identified by Watershed Groups and
	Local Agencies
Section 2	Water Quality Concerns and Priority Issues Identified by State and Federal
	Agencies
Section 3	Identification of Impaired Waters
Section 4	Priority Issues and Recommended Strategies
Section 5	Future Actions and Expectations

1 Water Quality Concerns and Priority Issues Identified by Watershed Groups and Local Agencies

Tanner Creek Watershed Committee

In 1999, the Tanners Creek Watershed Committee was formed under the direction of the Dearborn County Soil and Water Conservation District (SWCD). This group is hoping to develop a monitoring program within the Tanners Creek watershed (Stephenson, 1999).

Local Health Departments

The County Health Departments within the Middle Ohio-Laughery watershed are constantly challenged in assisting homeowners with their septic systems.

The number of septic system permits issued varies from county to county. For example, Ohio County issues an average of 50 permits per year, while others like Dearborn County, average 150 permits per year. The lot size requirements are also different between counties, and range between one to three acres in size. All counties require that each site have a soils report. Newer septic system guidelines from the State Board of Health, require more linear footage in the adsorption area, usually at a shallower depth and, if necessary, the installation of a perimeter drain at the fragipan depth to help lower the water table (depending on the soil type). The County Health Departments feel that more recently installed septic systems are operating properly (Baer, 1999; Ketenbrink, 1999; Bryant, 1999; Speiller, 1999).

There are an undetermined amount of failing septic systems within the Middle Ohio-Laughery watershed. The following is a list of possible reasons why septic systems fail:

- lot sizes are to small (exception Ohio County)
- poor soils
- lack of septic system management
- increased water intake into system from readily available public water supply
- filter fields are to small
- weather
- poor building site selection
- misconception that septic systems are they same as sewer systems.
- septic tank not emptied frequently
- decomposing bacteria die from grease and other harmful items
- laundry

The Switzerland County Health Department is finding more private wells testing positive with high E. coli levels. Potential sources of E. coli may be from failed septic systems and poor livestock manure management (Speiller, 1999).

In addition, there are an undetermined amount of straight pipe outlets that discharge septic effluent to the soil surface, into road ditches, and/or into drainage field tiles. These systems are illegal and create a public health hazard through the spread of disease.

Currently, these illicit discharges are uncovered and addressed through two primary means: 1. The owner sells the property and must disclose the system, and 2. A complaint is filed by residents.

Septic system education appears to be an ongoing need in the watershed. Even though many homeowners receive individual education about septic system management; in time, homeowners forget or don't believe that their systems will experience problems.

TABLE 1-1
Wastewater Treatment Information in the Middle Ohio-Laughery Watershed

Treatment Plant Facilities Community Yes No		nt							
		No	Comments						
Aberdeen		*	Seeking financial support from the Department of Commerce to help assist in the development of a sewer system.						
Aurora	*								
Batesville	*		Previously was on a sewer ban.						
Bright	*								
Florence	*		Installed sewer lines that will be connected to the new waste treatment system of the River Boat Hotel.						
Friendship	*		In 1998, the town installed a new sewage treatment plant.						
Gulford		*	Septic systems are located on bottom land soils which are occasionally saturated from flooding. In addition, homes in the area are typically located on only ¼ and ½ acre lots.						
Hartford		*	Community was established around 1810, small clusters of homes on very small lot sizes.						
Milan	*		Working with separating their storm drainage system from their sewer system for the past ten years.						
Moores Hills	*		Presently working towards a system upgrade.						
Lake Dildear		*	Old development with homes on small lots and poor soils for septic systems. These were primarily summer homes; however, more people are now staying longer or living there permanently.						
Lawrencburg	*								
Osgood,	*		New waste water treatment plant built in 1998.						
Rising Sun	*								
Sunman	*								
Versailles	*								
Wilmington		*	Primarily ¼ acre lots, with poor soils for septic systems.						

Soil and Water Conservation Districts

In 1997, the Soil and Water Conservation Districts in Dearborn, Ohio, Ripley and Switzerland counties held public meetings to identify local natural resource concerns. The following concerns and issues arose during those meetings:

 Ohio River and it's tributaries are experiencing streambank erosion; need more Grassland Conservation to help control erosion

- Urban development is causing a major increase of streambank erosion and flooding downstream.
- Pesticides are a concern
- Bacterial problems that may exist from livestock and hog operations.
- Potential nutrient/pesticide contamination to surface and ground water.
- Water quality
- Soil erosion
- Nuisance wildlife
- Loss of wildlife habitat (small game and birds)
- Need more education about conservation
- Restoration of Versailles Lake

Laughery Creek Northern Steering Committee

In December 1990, the Historic Hoosier Hills Resource Conservation and Development (RC&D) initiated, through a CWA Section 314 Clean Lakes Program, a watershed restoration project in the upper Laughery Creek watershed (HUA 05090203110). Currently, the group is working with the IDNR Division of Parks and Recreation to complete the last objective of the project, dredging Versailles Lake.

The main focus of the project was to improve water quality through reducing sediment, bacteria, nutrient, and pesticide loading to the lake and increasing public awareness through education. This has been accomplished by installing numerous conservation practices and providing management workshops and education programs.

For more information about the project area contact Historic Hoosier Hills, RC&D or through the internet at www.seidata.com/~pclear.

2 Water Quality Concerns and Priority Issues Identified by State and Federal Agencies

This section presents the combined efforts of state and federal agencies, and universities, such as IDEM, IDNR, USDA-Natural Resources Conservation Service, Ohio River Valley Water Sanitation Commision, Purdue University, Indiana University, Indiana Geologic Survey, and US Geological Survey, to assess water quality concerns and priority issues in the Middle Ohio-Laughery watershed. This multi-organization effort formed the basis of the Unified Watershed Assessment for Indiana.

Indiana's Unified Watershed Assessment (UWA)

The UWA workgroup gathered a wide range of water quality data that could be used to characterize Indiana's water resources. These data were used in "layers" in order to sort the 8-digit HUC watersheds according to the present condition of the water in lakes, rivers, and streams. The workgroup used only those data which concerned the water column, organisms

living in the water, or the suitability of the water for supporting aquatic ecosystems. Each "layer" of information/data was partitioned by percentiles into scores. The scores ranged between 1 and 5, with a score of 1 indicative of good water quality or minimum impairment, and a score of 5 indicating heavily impacted or degraded water quality. The scoring derived through the UWA process is presented in Table 2-1.

The data layers listed in Table 2-1 can be defined as:

- ♦ Lake Fishery: Large mouth bass community information for lakes
- Stream Fishery: Small mouth bass community information for streams
- Mussel Diversity: Indicates waters supporting species which are sensitive to water quality degradation, especially siltation, water clarity, and toxic chemical in sediment.
- River Biodiversity: A multi-species diversity measure using vertebrates.
- ♦ Lake Trophic Scores: Indicator for the rate at which a lake is 'aging' due to inputs of nutrients and other factors
- Sediment Potential: Indicator of potential sediment input to waterbodies in the watershed

The sources and additional information for these data layers include:

- ◆ Lake Fishery: From IDNR fisheries surveys of lakes and reservoirs from 1972 to 1994. Raw scores were averaged for all lakes in the watershed.
- ♦ Stream Fishery: From IDNR fisheries surveys of streams from 1970 to 1994. Raw scores were averaged for all streams in the watershed.
- ♦ Aquatic Life Use Support: IDEM, Office of Water Management, Assessment Branch
- ◆ Fish Consumption Advisories: ISDH and IDEM, Office of Water Management, Assessment Branch
- Fish Index of Biotic Integrity: IDEM, Office of Water Management, Assessment Branch
- Qualitative Habitat Evaluation Index: IDEM, Office of Water Management, Assessment Branch
- ♦ Lake Trophic Scores: Indiana Clean Lakes Program through IDEM, Office of Water Management, Assessment Branch. This score was based on information gathered from sampling conducted in the 1970's and 1980's.
- ♦ Sediment Potential: U.S. Geological Survey scored the population rate of change and the 1996 Conservation Tillage Transect data. The scores were then added and normalized to produce a sediment yield indicator for each watershed.

From this analysis, mussel diversity appears to be the primary water quality concern for the Middle Ohio-Laughery watershed. River biodiversity and stream fishery are also significant concerns for this watershed. Overall, the average score of the indicators was 3.

TABLE 6-1 RESULTS OF THE UNIFIED WATERSHED ASSESSMENT FOR MIDDLE OHIO-LAUGHERY

Data/Information Layer	Middle Ohio- Laugher (05090203) Score
Lake Fishery	2
Mussel Diversity	5
River Biodiversity	4
Lake Trophic Scores	3
Stream Fishery	4
Sediment Potentia L	2

Note:

The UWA scores range from 1 to 5, with a score of 1 indicating good water quality and a score of 5 indicating severe impairment.

Indiana's 2000-2001 Unified Watershed Assessment (UWA)

During summer 1999 the UWA workgroup used additional layers of information to identify the **resource concerns and stressors** for each of the 361 11-digit watersheds in Indiana. Examination of the human activities that have the potential to impact the ecosystem will help planners to focus on those areas where restoration may be most critical. Organizations can identify opportunities to use their programs and resources to address those areas.

This focusing process will illuminate areas where the interests of two or more partner agencies may converge. It is intended that this will lead to more effective allocation of resources for restoration and protection activities. At the local level, this information can assist groups to prioritize watershed activities and provide some discussion points for planning.

This amended assessment has the following benefits:

- Provides a logical process for targeting funds, which may be expanded or updated without changing the basic framework.
- Provides information at a finer resolution (11-digit hydrologic units) to agencies and local groups interested in watershed assessment.
- Identifies data gaps.
- Can be used as a compliment to other assessments, such as the 305(b) Report and 303(d) List.

Table 2-2 and Figure 2-1 show the results of the 2000-2001 UWA for the Middle Ohio-Laughery watershed.

3 Identification of Impaired Waters

Section 303(d) of the Clean Water Act requires states to identify waters that do not or are not expected to meet applicable water quality standards with federal technology based standards alone. States are also required to develop a priority ranking for these waters taking into account the severity of the pollution and the designated uses of the waters. Indiana's 303(d) list was approved by EPA on February 16, 1999.

Once the Section 303(d) list and ranking of waters is completed, the states are required to develop Total Maximum Daily Loads (TMDLs) for these waters in order to achieve compliance with the water quality standards. The TMDL is an allocation that determines the point and nonpoint source (plus margin of safety) load reductions required in order for the waterbody to meet water quality standards. IDEM's Office of Water Management has and continues to perform point source waste load allocations for receiving waters.

The following Middle Ohio-Laughery watershed waterbodies are on Indiana's 1998 Clean Water Act Section 303(d) list submitted and approved by EPA 303(d) list (Figure 6-1):

Ohio River: PCB fish consumption advisory, e-coli severity ranking: Medium Versailles Lake: Mercury fish consumption advisory Bischoff Reservoir: Mercury fish consumption advisory severity ranking: Low severity ranking: Low

4 Priority Issues and Recommended Management Strategies

Part I provided the existing water quality information for the Middle Ohio-Laughery watershed and Part II lists priority issues and concerns from local, state, and federal stakeholders in the watershed. This section pulls together the priority issues and concerns held by all stakeholders and recommends management strategies. Underlying all discussions of priority issues and concerns is the fact that improving water quality in the Middle Ohio-Laughery watershed will also enhance the natural and recreational values within the watershed. Each subsection below focuses on a single priority issue.

4.1 Data\Information and Targeting

As in many of the watersheds in Indiana, there is a need for more water quality data and information in order to prioritize and target specific areas of the Middle Ohio-Laughery watershed. In addition to targeting areas, there is also an identified need for more data and information about the actual impact on water quality from nonpoint sources. Success in restoring water quality in the Middle Ohio-Laughery watershed is fundamentally based on identifying the specific geographic problem areas; identifying all sources contributing to the impairment of the waterbody; and quantifying the contribution of a pollutant by each source.

Recommended Management Strategy 1: Local SWCD's, along with the natural resource agencies, county extension service, and other interested personnel, need to gather and analyze existing water quality data. Once information is gathered, targeting and prioritization should be managed at the 14 digit HUC watershed area (Figure 2-2 of Part I). The targeting and prioritization will require input from stakeholders living in those geographic areas. The purpose of this prioritization and targeting is to enhance allocation of resources in the effort of improving water quality.

Recommended Management Strategy 2: Through the development of Total Maximum Daily Loads (TMDLs) for impaired waterbodies in the Middle Ohio-Laughery watershed, all sources contributing to the impairment of a waterbody will be identified and quantified in terms of their contribution to the waterbody. This includes gathering more data and information on nonpoint sources of water pollution. Throughout the TMDL process, information and feedback from watershed stakeholders will be required in order to generate appropriate allocation scenarios. The result of developing TMDLs will be an understanding of the impact of nonpoint sources on water quality in the watershed.

Recommended Management Strategy 3: As discussed in Part I, there has only been extensive monitoring in certain parts of the watershed. Other areas have limited monitoring data and some areas none. Local soil and water conservation districts appear to be a logical vehicle to organize and manage a volunteer water quality monitoring programs with groups or organizations. It may be possible that a district staff person perform some of the monitoring (if available). Assistance in setting up a quality monitoring program is available from Hoosier Riverwatch. Presently, a database that would hold the volunteer water quality monitoring data for the Middle Ohio-Laughery watershed does not exist.

4.2 Streambank Erosion and Stabilization

The cutting and erosion of streambanks within the Middle Ohio-Laughery watershed was identified by many local, state, and federal stakeholders as a major concern. This cutting and erosion increases the sediment load in waterbodies and directly impacts the scenic and recreational values of waterbodies in the Middle Ohio-Laughery watershed. Streambank cutting and erosion is often a function of many factors that include: stream energy and velocity, flooding, and land management. Increased drainage in headwater streams and ditches increases stream energies during rain fall events and often leads to increased streambank cutting and erosion downstream. Hence, this problem is not easily solved.

Recommended Management Strategy: The Office of Water Management's (IDEM) primary mission is water quality; specifically, what is in the water. It is not the role of the Office of Water Management to spearhead an effort to address streambank erosion/cutting and flooding. However, the Office of Water Management can suggest ways to approach this difficult problem.

Structural stabilization of specific streambank areas in the Middle Ohio-Laughery watershed may solve problems on a temporary basis. However, a comprehensive understanding of drainage, stream flows and energies, and land management practices is required to adequately approach this problem. Conservation partners (local, state, and federal) are actively working within their specific geographic areas (typically at the county level); however, this may not facilitate solving the streambank cutting and erosion problems because efforts may not be coordinated between headwater and downstream areas. For example, work in Ripley County, which contains many of

the headwaters of Laughery Creek, to increase drainage should take into account the work and efforts of downstream partners to reduce flooding and streambank cutting. Conservation efforts should be in the context of watersheds and span county boundaries in order to account for downstream impacts.

4.3 Failing Septic Systems and Straight Pipe Discharges

Local county health departments and other stakeholders have identified failing septic systems and straight pipe discharge from septic tanks as significant sources of water pollution in the Middle Ohio-Laughery watershed. Straight pipe discharges from septic tanks and septic tanks connected to drainage tiles are illegal (327 IAC 5-1-1.5); however, these practices are ongoing in the Middle Ohio-Laughery watershed.

Recommended Management Strategy: All of the County Health Departments have stressed that more education is needed pertaining to septic system management. Developing a workshop which provides information on the impacts of failed septic systems, regulations, alternative treatment systems, and financial assistance is a good start. Local stakeholders could partner to help share in the cost of this program. To further these educational efforts, the direct impact of communities discharging their septic tank effluent to waterbodies needs to be adequately characterized. This will involve coordination between the Office of Water Management, County Health Departments, the Indiana State Department of Health, and other stakeholders. The option of choice to eliminate the illegal discharges will be a cooperative effort between homeowners and local, state, and federal stakeholders. If a cooperative solution can not be reached, illicit dischargers will be required to cease discharge.

4.4 Water Quality - General

The Clean Water Act Section 303(d) list presented in Section 3 lists water quality limited waterbodies for the Middle Ohio-Laughery Creek watershed.

Recommended Management Strategy: The Clean Water Act requires states to complete TMDLs for waterbodies listed on the Section 303(d) list. The Office of Water Management is currently evaluating and exploring the modeling process and data needs required to complete TMDLs for the Section 303(d) listed waterbodies in the Middle Ohio-Laughery watershed. Completion of a TMDL will involve loading allocations of a pollutant to both point and nonpoint sources. The Office of Water Management is currently drafting a TMDL strategy that involves stakeholder input throughout the process. IDEM's Office of Water Management designed a new surface water monitoring strategy in 1995 to assess the quality of Indiana waters within five years using a rotating basin approach. Approximately, one-fifth of the state is scheduled for monitoring each year for five years. The monitoring results are analyzed and each waterbody is assessed in the second year. Waterbody impairments are generally reported in the third year. In the year 2000, the Ohio River Basin will be sampled.

4.5 Fish Consumption Advisories

As noted in Part I and Part II, fish consumption advisories are more of a major concern in the Ohio River. They are more of a minor concern for the Versailles Lake and Bischoff Reservoir waterbodies that are within the Middle Ohio-Laughery watershed.

<u>Recommended Management Strategy 1</u>: Any person eating fish should check the fish consumption advisory every year and follow the recommendations. Soil and Water Conservation Districts could run yearly spring articles about fish consumption recommendations through local media sources or their newsletter.

4.6 Nonpoint Source Pollution - General

Nonpoint source pollution contributions are often difficult to assess or quantify. Currently, loadings of nonpoint source pollutants to water are often inferred by examination of land use practices, without actual measurements. In addition, the actual water quality impairments related to nonpoint source pollutants have not been well characterized in the Middle Ohio-Laughery watershed. Finally, very few regulatory control mechanisms exist to control nonpoint source pollution.

Recommended Management Strategy 1: Through the TMDL development process, the Office of Water Management will identify, assess, and quantify nonpoint source pollutant loadings to impaired waterbodies. In order to accomplish this task, the Office of Water Management will work closely with local, state, and federal stakeholders at the watershed and subwatershed level. Loading scenarios for nonpoint source pollutants will be developed by the Office of Water Management and reviewed by local, state, and federal stakeholders. Implementation of nonpoint source controls will involve a blend of funding assistance and regulatory action, where applicable.

Recommended Management Strategy 2: Numerous funding mechanisms, such as Conservation Reserve Program, Environmental Quality Incentive Program, Lake and River Enhancement program, and 319(h) grants, exist to promote practices to reduce nonpoint source pollution in the watershed. For example, the CLEAR watershed project received two Section 319 grants, a Section 314 grant, and project funding from USDA federal and IDNR state water quality programs, totaling approximately \$1.1 million between 1990 and 1999. These programs helped the CLEAR project plan more efficiently and effectively in addressing nonpoint source pollution in the upper Laughery Creek watershed. Other watershed areas could receive similar types of treatment. The prioritization and targeting discussed previously in Part II should be used to allocate further application of resources.

4.7 Point Sources - General

During the 1998 Intensive Sampling by the Office of Water Management, several permitted dischargers were found to be discharging in excess of their permit limits. In addition, illicit point source discharges, such as tiles discharging septic tank effluent, exist in the watershed.

Recommended Management Strategy: The Permitting and Compliance Branch of the Office of Water Management is responsible for issuing and monitoring compliance of NPDES permit holders. Clearly, more emphasis and resources are needed to identify and correct illicit point sources and noncomplying point sources. Improving compliance of NPDES dischargers and identifying illicit dischargers will involve fostering a working relationship with other local, state, and federal stakeholders to monitor compliance and report unusual discharges or stream

appearance. In regards to illicit discharges, the Office of Water Management will work with local, state, and federal stakeholders to identify and eliminate these sources of water pollution.

5 Future Expectations and Actions

As discussed in Part I, this Watershed Restoration Action Strategy is intended to be fluid, living document that will be revised or amended as new information becomes available. Section 5.1 discusses expectations derived from the Strategy and how progress will be measured. Specific revisions and amendments to the Watershed Restoration Action Strategy are discussed in Section 5.2. Finally, the Watershed Restoration Action Strategy will be reviewed by all interested stakeholders before it becomes final, as described in Section 5.3.

5.1 Expectations and Measuring Progress

The Middle Ohio-Laughery Watershed Strategy provides a starting point to address water quality concerns held by local, state, and federal stakeholders. Part II provides recommended management strategies to help address these concerns.

Measurement of progress is critical to the success of any plan. Water quality improvements will not take place overnight. Measuring of progress in terms of water quality will be provided through the Office of Water Management Assessment Branch's rotating basin monitoring strategy. Specifically, they will be conducting sampling again in the Ohio River Basin, which includes the Middle Ohio-Laughery watershed, in the year 2000. This will allow an assessment of progress in improving water quality.

Appendix A contains a listing of the strategies, suggested milestones, and suggested time-frames for completion.

5.2 Expected Revisions and Amendments

This Watershed Restoration Action Strategy is intended to provide a starting point to improve water quality and measure the improvement. Hence, this document will require revisions and amendments as new information becomes available. The future revisions and amendments have been divided into those that are expected within the next year (Section 5.2.1) and those that will occur over a long-term basis (Section 5.2.2).

5.2.1 Long-Term Revisions and Amendments

The Office of Water Management is moving toward adopting a watershed management approach to solve water quality problems. Part of the watershed approach is the use of a rotating basin management cycle. The Assessment Branch of the Office of Water Management has already adopted this rotating basin cycle in its intensive monitoring and assessment of Indiana waterbodies (this is in addition to the already established fixed monitoring station

monitoring which occurs on a monthly basis). Based on the cycle the Assessment Branch is using, the next intensive monitoring of the Middle Ohio-Laughery watershed will occur during the sampling season of 2000. The information from the 2003 monitoring effort will be incorporated into the Watershed Restoration Action Strategy.

5.3 Review of the Watershed Restoration Action Strategy

Before this Watershed Restoration Action Strategy becomes final, it will undergo rigorous review. The first stage of review will be performed internally by the Office of Water Management. Once the Watershed Restoration Action Strategy has been revised to address internal Office of Water Management comments, it will be circulated to local, state, and federal stakeholders in the watershed and meetings within the watershed will be held to discuss the document. Written comments from local, state, and federal stakeholders will be addressed and the Watershed Restoration Action Strategy will again be revised to incorporate applicable comments. Once internal and external comments have been addressed, the final version of the Watershed Restoration Action Strategy will be released.

TABLE 2-2

HYDROLOGIC UNIT SCORES for Each Parameter Used in the Unified Watershed																
	Assessment [2000-2001]															
Нус	11 Digit Irologic Unit	Mussel Diversity and Occurrence	Aquatic Life Use Support	Recreational Use Attainment	Stream Fishery	Lake Fishery	Eurasian Milfoil Infestation Status	Lake Trophic Status	Critical Biodiversity Resource	Aquifer Vulnerability	Population Using Surface Water for Drinking Water	Residential Septic System Density	Degree of Urbanization	Density of Livestock	% Cropland	Mineral Extraction Activities
	05090203030	nd	nd	nd	2	nd	nd	nd	2	5	2	4	2	2	1	1
	05090203040	nd	nd	nd	nd	nd	nd	nd	2	4	2	4	2	3	1	1
	05090203050	nd	nd	nd	4	nd	nd	nd	2	4	2	4	3	2	1	1
<u> </u>	05090203060	nd	nd	nd	nd	nd	nd	nd	3	4	2	2	2	3	2	1
] h e	05090203070	nd	nd	nd	1	nd	nd	nd	3	4	2	3	2	3	1	1
) n	05090203080	nd	nd	nd	4	nd	nd	nd	2	4	2	3	2	2	1	1
Ļ	05090203100	nd	nd	nd	nd	nd	nd	nd	2	3	2	3	2	2	1	1
Ohio-Laughery	05090203110	nd	nd	nd	nd	2	nd	3	2	5	2	2	2	2	1	1
P	05090203130	nd	nd	nd	nd	nd	nd	nd	2	5	2	3	2	3	1	1
<u>e</u>	05090203150	3	nd	nd	nd	5	nd	nd	2	4	2	3	1	3	1	1
Middle	05090203170	nd	nd	nd	nd	nd	nd	nd	2	2	2	3		3	1	1
	05090203180	3	nd	nd	nd	nd	nd	4	1	5	2	3	2	3	1	1
	05090203190	3	nd	nd	nd	nd	nd	nd	2	5	2	2	2	3	1	1
	05090203200	3	nd	nd	nd	nd	nd	nd	2	5	2	2	2	3	1	1
	05090203210	3	nd	nd	nd	nd	nd	nd	1	5	2	2	1	3	1	1

Middle Ohio-Laughery Watershed

